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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Henri Rosset

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03/20/2009

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EXAMINER

GRABOWSKI, KYLE ROBERT

ART UNIT

PAPER NUMBER

3725

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,367	Applicant(s) ROSSET, HENRI	
	Examiner Kyle Grabowski	Art Unit 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response the RCE filed on 02/09/09 drawn to the claims previously filed on 01/16/09

Specification

2. The disclosure is objected to because of the following informalities: The amendments to the specification filed on 07/17/08 include reference to “fluorescent fibers 2” however the second ply is also referenced as ‘2’. The examiner believes this to be a typographical error with the intended meaning to be “fluorescent fibers 6” which is consistent with the drawings. Appropriate correction is required.

Claim Objections

3. Claim 4 is objected to because of the following informalities: Claim 4 recites a “said second authentication element of said first ply” which lacks proper antecedent basis in claim 1 from which it depends. It is construed to mean “said second authentication element of said *second* ply” [emphasis added]. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-10, 12-14, and 18-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Rausing et al. (US 4,720,325).

7. In respect to claims 1-2, Murakami et al. disclose a security paper comprising two fibrous paper plies: a first ply 20 and a second ply 10 (Col. 6, 60-65, Fig. 5); the second ply 10 may contain reinforcing elements for example a dry paper strength agent, polyacrylamide, a polyamide fiber (Col. 4, 43-52); Murakami et al. also discloses the use of additional authentication elements such as watermarking (Col. 7, 11-14) but does not explicitly disclose a watermark (or any other first authentication element) provided in a region of non-zero thickness. Rausing et al. teach a method of providing a watermark

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to a first ply in which a relief-like structure is created (Col. 2, 37-53, Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the first ply 20 taught in Murakami et al. with a non-zero thickness watermark as taught in Rausing et al. to provide a watermark with considerably greater precision and more distinct contours (Col. 2, 9-16, Rausing et al.).

8. In respect to claim 3, Although Murakami et al. does not explicitly disclose providing polyethylene terephthalate fibers (PET) it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PET fibers, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

9. In respect to claims 4 and 5, Murakami et al. additionally disclose a second authentication element comprising iridescent particles (nacreous pigments) present solely in the second ply 10 (Col. 11, 17-19); the first authentication element comprising a watermark is described above.

10. In respect to claims 6 and 7, Murakami et al. additionally disclose providing a fluorescent agent to the iridescent particles (nacreous pigments) (Col. 4, 64 – Col. 5, 6) which react to ultraviolet rays (an electromagnetic field).

11. In respect to claim 8, Murakami et al. additionally disclose the first ply 20 being having a substantially greater thickness than the second ply 10 (i.e. second ply 10 is the "relatively thin layer") (Col. 7, 1-3, Fig. 5).

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12. In respect to claims 9 and 10, the iridescent particles also act as a reinforcing element in addition to their authentication function (providing a rigid material acts at least in some respect may constitute a reinforcing element).

13. In respect to claims 12 and 14, Murakami et al. additionally disclose that the first ply 20 and second ply 10 are paper plies (Col. 6, 62) and may be made of a paper-making pulp such as cotton (Col. 4, 48) and used as banknotes (Col. 12, 3-9).

14. In respect to claim 13, Murakami et al. additionally disclose that additional plies of three or more layers may be combined (Col. 7, 6-9).

15. In respect to claim 18, Murakami et al. additionally disclose that the first ply 20 may be 80 g/m^2 and the second ply 10 may be 30 g/m^2 . Because the material is substantially the same (comprised of mostly pulp fibers) the thickness of the first ply 20 is construed to be about 2 times greater (i.e. the weight per area is inferred to substantially correlate with the thicknesses of the plies.)

16. In respect to claims 19-21, Murakami et al. in view of Rausing et al. disclose the claimed subject matter for the reasons stated above.

17. In respect to claim 22, Murakami et al. additionally disclose that additional plies of three or more layers may be combined (Col. 7, 6-9) and that any additional authentication elements may be used in combination such as dyed fibers or security marks (Col. 7, 10-13) which are different than watermarks. Although Murakami et al. do not specifically disclose presenting dyed fibers or security marks in the third ply it would have been obvious

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18. Claims 1 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Crane et al. (US 4,552,617). Murakami et al. disclose a security paper comprising two fibrous paper plies: a first ply 20 and a second ply 10 (Col. 6, 60-65, Fig. 5); the second ply 10 may contain reinforcing elements for example a dry paper strength agent, polyacrylamide, a polyamide fiber (Col. 4, 43-52); Murakami et al. also discloses the use of additional authentication elements such as watermarking (Col. 7, 11-14) but does not explicitly disclose a watermark (or any other first authentication element) provided in a region of non-zero thickness or wet-assembly via cylinder-mold machine with watermark wire however Crane teaches a method of providing a watermark to a first ply in which a relief-like structure is created (Fig. 9); the method includes using a Fourdrenier (watermark) wire 18 and cylinder-mold machine during wet assembly (Col. 2, 41 - Col. 3, 12, Figs. 2 & 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the first ply 20 taught in Murakami et al. with a non-zero thickness watermark as taught in Crane to provide a high quality watermark having detailed features (Col. 4, 20-28, Rausing et al.). (Note that "simulated watermark" only denotes a method different from a traditional watermark).

19. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Rausing et al. (US 4,720,325) as applied to claim 1 above, and further in view of Nordic Pulp and Paper Research. Murakami et al. as modified by Rausing et al. substantially disclose the claimed subject matter for the

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reasons stated above but do not disclose the tear strengths of any of the fibrous paper plies, however a tear index of $10 \text{ mNm}^2/\text{g}$ is dependent upon the material one selects from Murakami et al. as the second ply. Nordic Pulp and Paper show that a pulp such as pine kraft have a tear index above $10 \text{ mNm}^2/\text{g}$ for all brands listed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a pine kraft pulp to insure that the tear index was higher than $10 \text{ mNm}^2/\text{g}$. Also, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

20. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Rausing et al. (US 4,720,325) as applied to claim 1 above, and further in view of Schmitz et al. (US 6,491,324). Murakami et al. as modified by Rausing et al. substantially disclose the claimed subject matter for the reasons stated above including utilizing a security thread as an additional authentication element (Col. 7, 13) but do not disclose a magnetic layer, for example, that would react to microwave electronic fields however Schmitz et al. disclose a banknote utilizing a security thread having a magnetic layer (Abstract) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the security thread taught in Murakami et al. as modified by Rausing et al. with magnetic properties to allow the security thread to be mechanically testable (Abstract, Schmitz et al.)

Response to Arguments

21. Applicant's arguments, see remarks, filed on 01/16/09, with respect to the rejection(s) of claim(s) 1-22 under Murakami et al. '432 in view of Murakami et al. '276 have been fully considered and are persuasive. The applicant has demonstrated that the watermarks taught in Murakami et al. '432 are through holes therefore not having a non-zero thickness as distinctly pointed out in Col. 2, 50-62, Murakami '432 as pertaining to the uppermost ply. The watermark effect is a combination of the first ply with areas of zero thickness and the second ply, therefore creating an area of overall reduced thickness (as is known for watermarks).

Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made:

22. Claims 1-10, 12-14, and 18-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Rausing et al. (US 4,720,325).

23. Claims 1 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Crane et al. (US 4,552,617).

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24. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Rausing et al. (US 4,720,325) as applied to claim 1 above, and further in view of Nordic Pulp and Paper Research.

25. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US 5,565,276) in view of Rausing et al. (US 4,720,325) as applied to claim 1 above, and further in view of Schmitz et al. (US 6,491,324).

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle Grabowski whose telephone number is (571)270-3518. The examiner can normally be reached on Monday-Thursday, every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571)272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kyle Grabowski/
Examiner, Art Unit 3725

/Dana Ross/
Supervisory Patent Examiner, Art
Unit 3725